

The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* CHARLES E. ROMANO, JR.

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Appeal 2006-2197  
Application 10/068,824  
Technology Center 1700

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Decided: September 21, 2006

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Before KIMLIN, PAK, and JEFFREY T. SMITH, *Administrative Patent Judges*.  
JEFFREY T. SMITH, *Administrative Patent Judge*.

DECISION ON APPEAL

Applicant appeals the Examiner's final rejection of claims 1, 3-22, and 38. Claims 23-36 stand withdrawn from consideration (Br. 1). We have jurisdiction under 35 U.S.C. § 134.

We AFFIRM

## CITATION OF REFERENCES

In rejecting the claimed subject matter the Examiner relies on the following references:

Kawano	US 5,478,631	Dec. 26, 1995
Ueda	EP 0 791 475	Aug. 27, 1997
Tomizawa	US 6,224,971	May 1, 2001
Niu	US 6,599,593	Jul. 29, 2003

The Examiner has entered the following grounds of rejection:<sup>1</sup>

Claim 38 stands rejected under 35 U.S.C. § 112, ¶ 1 as failing to comply with the written description requirement.

Claims 1, 3, 9, 11, 12, 15, 21, and 22 stand finally rejected under 35 U.S.C. § 102(b) as being anticipated by Kawano.

Claims 1, 3, 7-15, and 19-22 stand finally rejected under 35 U.S.C. § 103(a) as being unpatentable over Kawano.

Claims 1, 2, and 4-6 stand finally rejected under 35 U.S.C. § 103(a) as being unpatentable over Kawano and further in view of Tomizawa.

Claims 1 and 15-18 stand finally rejected under 35 U.S.C. § 103(a) as being unpatentable over Kawano and further in view of Ueda.

Claims 1, 7, 8, 21, and 22 stand finally rejected under 35 U.S.C. § 102(e) as being anticipated by Niu.

Claims 1, 9-14, 19-22, and 38 stand finally rejected under 35 U.S.C. § 103(a) as being unpatentable over Niu.

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<sup>1</sup> The Examiner in the statement of the rejections appearing in the Answer has inadvertently included claims 2 and 37 which have been indicated by Appellant as having been canceled (Br. 1). We have excluded these claims from the statement of the rejections.

Claim 38 stand finally rejected under 35 U.S.C. § 103(a) as being unpatentable over Niu.

Claims 1 and 4-6 stand finally rejected under 35 U.S.C. § 103(a) as being unpatentable over Niu in view of Tomizawa.

Claims 1 and 15-18 stand finally rejected under 35 U.S.C. § 103(a) as being unpatentable over Niu in view of Ueda.

Upon careful consideration of the views expressed by the Appellant, in the Brief filed October 13, 2005, and the Examiner, in the Answer of December 20, 2005, we are in agreement with the position presented by the Examiner. Our reasons follow.

## BACKGROUND

The present invention relates to an ink recording element comprising a support having thereon a hydrophilic absorbing layer and a laminate adhesion promoting absorbing hydrophilic overcoat. According to Appellant, the present invention produces an image which has excellent image quality, and the ability to absorb large amounts of ink and dry quickly to avoid blocking and exhibit high optical densities in the printed areas (Specification 3). Representative claims 1 and 38, as presented in the Brief, appear below:

1. An ink recording element comprising a support having thereon a hydrophilic absorbing layer and a laminate adhesion promoting absorbing hydrophilic overcoat polymer layer comprising acetoacetylated poly(vinyl alcohol).

38. An ink recording element comprising a support having thereon a hydrophilic absorbing layer and a laminate adhesion promoting absorbing hydrophilic overcoat polymer layer comprising acetoacetylated poly(vinyl alcohol) and an anionic vinyl latex polymer or an anionic polyurethane dispersion.

## THE REJECTION UNDER § 112, ¶ 1

Claim 38 stands rejected under § 112, ¶ 1 as failing to comply with the written description requirement. Specifically, the Examiner asserts that the specification as originally filed does not provide written descriptive support for a laminate adhesion promoting absorbing hydrophilic overcoat polymer layer comprising an “anionic vinyl latex polymer.” (Answer 4). Appellant argues that the Examples in the specification, particularly Example 4, provide written description of an anionic latex (Br. 3). In support of this position, Appellant provides the product information sheet for Mocryl® 132 to indicate that one of ordinary skill in the art would understand that Mocryl® 132 is anionic (Br. 4). Appellant further argues that the anionic nature of Mocryl® is an inherent characteristic of the chemical compound bearing the Mocryl trade name (Br. 4). Upon careful review of the product information sheet for Mocryl® 132, we agree with the Examiner that it is not readily apparent from this document that the latex is anionic (Answer 12). We also note that the Examiner has requested that Appellant provide further explanation or information regarding the chemical structure. However, Appellant has failed to provide such information in responsive briefing. Moreover, Mocryl® does not reasonably convey to one of ordinary skill in the art that any and all anionic vinyl latex is useful for the claimed ink composition.

Appellant, Brief page 4, also relies on the specification disclosures of anionic polyurethane dispersions. The cited portions of the specification are not persuasive because these disclosures do not refer to an anionic vinyl latex polymer as required by the claim. Appellant has not directed to evidence that establishes

that a preference for an anionic polyurethane dispersion also requires that the other polymers must also be anionic. An *ipsis verbis* disclosure is not necessary to satisfy the written description requirement of § 112. Instead, the disclosure need only reasonably convey to persons skilled in the art that the inventor had possession of the subject matter in question. *See In re Edwards* 568 F.2d 1349, 1351-52, 196 USPQ 465, 467 (CCPA 1978). The Examiner, however, has met the initial burden of proof by establishing that Appellant is claiming embodiments of the invention that are completely outside the scope of the specification. *See In re Alton*, 76 F.3d 1168, 1175, 37 USPQ2d 1578, 1583 (Fed. Cir. 1996). Appellant's arguments and evidence have not overcome this *prima facie* case. The Examiner's rejection is affirmed.

#### THE REJECTIONS OVER KAWANO

Claims 1, 3, 9, 11, 12, 15, 21, and 22 stand rejected under 35 U.S.C. § 102(b) as anticipated by Kawano.<sup>2</sup> The Examiner has found that Kawano discloses an ink jet recording element that meets the presently claimed invention (Answer 5-6). Appellant argues that the subject matter of the appealed claims is not anticipated by Kawano because evidence indicates that the phrase “lamine adhesion” has a specific meaning which is different from the meaning of the term “adhesion.” (Br. 8). More specifically, Appellant states on Brief pages 9-10 the following:

The term “lamine adhesion” and the term “adhesion” have accepted and different meanings in the art. “Lamine adhesion” refers to the

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<sup>2</sup> Appellants have not provided separate arguments for the rejected claims. We select claim 1 as representative of the rejected claims and will limit our discussion thereto.

adhesion of a coating as part of a laminate. There are multiple aspects to laminate adhesion, as is illustrated by ASTM Test Method F2226-03, Section 4.6 and FIG. 2 on pg. 2, provided in Appendix II. The term “laminate adhesion” includes the adhesion of each layer within the multi-layer laminate to an adjacent layer, the adhesion of the multiple layers to the support, and adhesion of all the laminate layers together. Laminate adhesion failure can occur between any two layers of the multi-layer structure, not just at the interface of a layer with the substrate or at the interface of a layer with a layer containing acetoacetylated poly(vinyl alcohol). The cited prior art contains a different term, that is, simple “adhesion”, which refers to the adhesion between a layer and the adjacent substrate. Simple adhesion is understood by those of ordinary skill in the art to refer to the relationship between the substrate and layer applied directly to the substrate. See ASTM Test Method D3359-02, especially the Appendix at X1.3.2., provided in Appendix II. The inventive element presently claimed has an adhesion promoting overcoat layer over inner layer(s). The use of this layer improves the adhesion of all the layers, both to adjacent layers and to the substrate. In “laminate adhesion” as presented used, the substrate is not in contact with the adhesion promoting overcoat layer. In the prior art, enhanced “adhesion” involves an adjacent layer. Therefore, the definitions of the terms “adhesion” and “laminate adhesion” are not synonymous and the reference cannot anticipate the present claims.

Appellant’s arguments and evidence are not persuasive. The ASTM Test Method F 2226-03 disclosure does not provide a specific definition for the phrase “laminate adhesion.”<sup>3</sup> The reference to section 4.6 of ASTM Standard F 2226-03 also does not provide a special definition for “laminate adhesion.” Appellant in his discussion of laminate adhesion on Brief page 9 recognizes that failure can occur between any two layers of a multilayer structure. Appellant also recognizes that

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<sup>3</sup> It is noted that ASTM Test Method F 2226-03 provides a terminology section on page 1. The discussion of the various terminology in the portion of the reference does not provide a special meaning to the phrase “laminate adhesion.”

the term adhesion includes failure occurring between a layer and an adjacent layer. As such, the description provided by the Appellant for the disputed language does not provide a patentable distinction. Appellant has not directed us to evidence that establishes that laminate adhesion excludes the substrate from being in contact with the adhesion promoting overcoat layer. Thus, Appellant's definition for laminate adhesion does not distinguish the claimed ink recording element from the cited prior art.

Appellant's reference to ASTM test method D 3359-02 does not provide a distinct definition for the phrase "laminate adhesion." Moreover, the test method D 3359-02 "cover procedures for assessing the adhesion of coating films to metallic substrates by applying and removing pressure-sensitive tape over cuts made in the film." (P. 1: 1.1). Appellant has not established that metallic substrates are at issue in the present invention. Thus, the relevance of this document to the present invention is unclear. Appellant's reference to Appendix XI.3.2 is also been noted. This section discusses the specific test method of D 3359-02 and particularly the adhesion failure and mat substrate articles, however, there is no specific definition given for "laminate adhesion." For the reasons set forth above as well as those presented in the Answer, we agree with the Examiner that Appellant has not established a special meaning for the phrase "laminate adhesion" which provides a patentable distinction between the ink recording element described in Kawano and the claimed invention.

Claims 1, 3, 7-15 and 19-22 stand rejected under 35 U.S.C. § 103(a) over Kawano. We affirm for the reasons presented in the Answer and add the following.<sup>4</sup>

Appellant argues Kawano fails to disclose or suggest a laminate adhesion promoting overcoat layer containing acetoacetylated polyvinyl alcohol which provides better laminate adhesion. Appellant also argues that Kawano fails to mention the property laminate adhesion. Finally, Appellant argues that even assuming a *prima facie* case has been made, the present invention provides surprising results (Br. 15-16).

Appellant's arguments regarding the phrase "laminate adhesion" are not persuasive for the reasons set forth in our previous discussion of the Kawano reference. We note Appellant has failed to argue that Kawano does not provide a hydrophilic absorbing layer that comprises acetoacetylated polyvinyl alcohol. Rather, Appellant argues that the polyvinyl alcohol of Kawano must be used in conjunction with an amphoteric latex (Br. 16). Appellant's arguments are not persuasive because the present claim language includes the transitional term "comprising." This language allows for the addition of other components to be used in conjunction with the acetoacetylated polyvinyl alcohol. Appellant's discussion of the examples of Kawano which allegedly provide inferior results in strength and water resistance are not persuasive. Appellant has not limited the present invention to any particular strength and/or water resistant characteristics. As such, the results achieved by Kawano do not serve to provide a patentable distinction between Kawano and the present invention. Further, we also share the

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<sup>4</sup> We select claim 1 as representative of the rejected claims.

Examiner's concern with the examples in the present record and the showings presented in the Declaration of Romano included in Appendix II of Appellant's Brief (See the Examiner's discussion of the examples and the Declaration, Final Rej. 6-8). Appellant has not established that the invention specified by the appealed claims are commensurate with the showing of unexpected results. That is, Appellant has not established that the adhesive properties of the Kawano invention are patentably distinct from the adhesive properties of the presently claimed invention. While Appellant has provided a lengthy discussion of an alleged difference between "lamine adhesion" and "adhesion," such discussion does not provide a basis for patentable distinction between the invention of Kawano and the presently appealed claims.

Appellant's discussion of the examples in the specification and the results provided in Table II of the specification are not persuasive. The Specification does not provide information sufficient to determine the difference between a peel force described as excellent versus a peel force described as poor. Moreover, this terminology does not provide an indication as to where the laminate failure occurred. That is, there is no indication as to whether the laminate failure occurred between the overcoat layer and the adjacent underling substrate or some other intervening layer. As such, these examples are insufficient to establish a distinction even if we were to use Appellant's definition of "lamine adhesion." For the foregoing reasons and those set forth in the Answer, the rejection of claims 1, 3, 7-15, and 19-22 under § 103(a) as obvious over Kawano is affirmed.

Claims 1 and 4 to 6 have been rejected under 35 U.S.C. § 103(a) over the combined teachings of Kawano and Tomizawa. The Examiner relies on the

Tomizawa reference for describing the particular properties of acetoacetylated polyvinyl alcohols. More specifically, the Examiner recognizes that Tomizawa and the present invention use the same class of commercially available acetoacetylated polyvinyl alcohol (Answer 8). The Examiner concludes that the acetoacetylated polyvinyl alcohols described in Tomizawa must possess the properties of the rejected claims. Appellant in the Brief has not challenged the Examiner's position that the acetoacetylated polyvinyl alcohol disclosed in Tomizawa possesses the properties of the rejected claims. Rather, Appellant argues that Tomizawa, like Kawano, fails to teach disclose or suggest laminate adhesion (Br. 21). Appellant further argues that Tomizawa does not disclose a laminate structure (Br. 21).

Appellant's arguments are not persuasive because Tomizawa, like Kawano, is directed to ink recording sheets. Kawano discloses the suitability of using acetoacetylated polyvinyl alcohol in ink jet recording sheets. A person of ordinary skill in the art would reasonably expect that the acetoacetylated polyvinyl alcohol disclosed in Tomizawa would have also been suitable for use in the inkjet recording sheets disclosed in Kawano. Appellant has not established that the acetoacetylated polyvinyl alcohol which has the properties described in claims 4 and 6 provide unexpected results in ink recording sheets. Appellant's arguments regarding laminate adhesion presented on page 22 of the Brief have been considered and are not persuasive for the reasons set forth above in the discussion of the Kawano reference.

Claims 1 and 15-18 stand rejected under 35 U.S.C. § 103(a) over the combined teachings of Kawano and Ueda. The Examiner cites the Ueda reference

for teaching the use of gelatin in inkjet recording media (Answer 8-9). Appellant does not specifically address the suitability of adding gelatin to the teachings of the Kawano reference. Rather, Appellant repeats the arguments regarding the phrase “laminate adhesion.” These arguments are not persuasive for the reasons set forth above in the discussion the Kawano reference. The Examiner’s motivation for adding gelatin to the composition of Kawano is reasonable. Appellant has failed to provide arguments which establish otherwise. The Examiner’s rejection is affirmed.

#### THE REJECTIONS OVER NIU

Claims 1, 7, 8, 21 and 22 stand rejected under 35 U.S.C. § 102(e) as anticipated by Niu.<sup>5</sup>

The Examiner discloses that Niu discloses ink receiving media that may be used as an inkjet recording medium. According to the Examiner, Niu discloses that the top layer may comprise an acetoacetylated polyvinyl alcohol (Answer 9). Appellant argues that Niu does not disclose a laminate adhesion promoting overcoat containing acetoacetylated polyvinyl alcohol which provides better laminate adhesion (Br. 25). Appellant’s arguments are not persuasive. Niu discloses that acetoacetylated polyvinyl alcohol is suitable for use in the top layer of an inkjet recording medium as disclosed by the Examiner. The Appellant has not specifically addressed the teachings appearing in col. 9 of the cited reference. As discussed above, claim 1 includes the transition term “comprising” in the discussion of the top layer of the claimed ink recording element. As such, the top

layer does not exclude the presence of other components. Appellant has not established that the other components disclosed in the Niu reference detract from the adhesive properties obtained therein. As such, for the reasons set forth in the Answer and discussed above, we affirm the Examiner's rejection.

Claims 1, 9-14, 19-22 and 38 stand rejected under 35 U.S.C. § 103(a) as obvious over Niu.<sup>6</sup> We affirm the rejection of these claims for the reason set forth in the Answer and above in the discussion of the 102 rejection. Appellant repeats his arguments regarding the phrase "laminated adhesion." This discussion is not persuasive of patentability for the reasons set forth above. As discussed above Niu discloses the suitability of employing an acetoacetylated polyvinyl alcohol in an inkjet recording medium. This disclosure by Niu renders the subject matter of claim 1 unpatentable. Appellant's discussion of the control Example 4 of the present record is not persuasive for the reasons discussed above when discussing the Kawano reference. The evidence provided in the present record is not sufficiently specific to establish that the present invention is patentably distinct from the invention of the cited references. Thus, we affirm the Examiner's rejection for the reasons previously established on the present record.

Claims 1 and 4 to 6 stand rejected under 35 U.S.C. § 103(a) as unpatentable over the combined teachings of Niu and Tomizawa. We affirm.

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<sup>5</sup> Appellant has not provided separate argument for the individual claims. Thus, we select claim 1 as representative of the rejected claims and will limit our discussion thereto.

<sup>6</sup> Appellant has not presented separate arguments for the individual claims. Therefore, we select claim 1 as representative of the rejected claims.

The Examiner relies on the Tomizawa reference for describing the particular properties of acetoacetylated polyvinyl alcohol. More specifically, the Examiner recognizes that Tomizawa and the present invention use the same class of commercially available acetoacetylated polyvinyl alcohol (Answer 8). The Examiner concludes that the acetoacetylated polyvinyl alcohols described in Tomizawa must possess the properties of the rejected claims. Appellant in the Brief has not challenged the Examiner's position that the acetoacetylated polyvinyl alcohol disclosed in Tomizawa possesses the properties of the rejected claims. Rather, Appellant argues that Tomizawa, like Niu, fails to teach, disclose or suggest laminate adhesion (Br. 30). Appellant further argues that Tomizawa does not disclose a laminate structure (Br. 30).

Appellant's arguments are not persuasive because Tomizawa, like Niu, is directed to ink recording sheets. Niu discloses the suitability of using acetoacetylated polyvinyl alcohol in inkjet recording sheets. A person of ordinary skill in the art would reasonably expect that the acetoacetylated polyvinyl alcohol disclosed in Tomizawa would have also been suitable for use in the inkjet recording sheets disclosed in Niu. Appellant has not established that the acetoacetylated polyvinyl alcohol which has the properties described in claims 4 and 6 provides unexpected results in ink recording sheets. Appellant's arguments regarding laminate adhesion presented on page 31 of the Brief have been considered and are not persuasive for the reasons set forth above in the discussion of the Niu reference.

Claims 1 and 15-18 are rejected under 35 § 102(b) over Niu and Ueda. The Examiner cites the Ueda reference for teaching the use of gelatin in inkjet recording media (Answer 11). Appellant does not specifically address the suitability of adding gelatin to the teachings of the Kawano reference. Rather, Appellant repeats the arguments regarding the phrase “lamine adhesion.” (Br. 32). These arguments are not persuasive for the reasons set forth above in the discussion of the Niu reference. The Examiner’s motivation for adding gelatin to the composition of Niu is reasonable. Appellant has failed to provide arguments which establish otherwise. The Examiner’s rejection is affirmed.

Claim 38 stands rejected under 35 U.S.C. § 103(a) as obvious over Niu in view of Appellant’s admission on pages 8, 9 of the specification. We affirm for the reasons forth in the Answer and add the following.

Appellant repeats the arguments that Niu is silent as to disclosing a laminate adhesion promoting overcoat containing acetoacetylated polyvinyl alcohol (Br. 6-7). Appellant’s arguments are not persuasive for the reasons discussed above. Appellant has not argued that the commercially available polyurethane dispersion discussed by the Examiner would not have been suitable for use in the invention of Niu. Further Appellant argues that Niu does not recognize improving laminated adhesion by using the combination of acetoacetylated polyvinyl alcohol and anionic polyurethane dispersion. These arguments are not persuasive. Appellant has not directed us to evidence that the claimed polyvinyl alcohol and polyurethane provide unexpected results. It is not disputed that Niu in column 9 discloses that the combination of a polyurethane resin and acetoacetylated polyvinyl alcohol can be used in the top layer of inkjet recording media. The Appellant has not

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established that anionic polyurethane dispersion provides unexpected results over other known polyurethane dispersions used in combination with acetoacetylated polyvinyl alcohol.<sup>7</sup> The rejection of claim 38 is affirmed for the reasons set forth above and by the Examiner.

In summary we affirm each of the Examiner's rejections under 35 U.S.C. §§ 102, 103 and 112, ¶ 1.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED

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<sup>7</sup> Appellant's reliance on evidence provided in the form of declarations and examples contained in the present specification are not persuasive for the reason set forth in the discussion of the rejections over the Kawano reference. As stated above, this evidence is not limited to the scope of the appealed claims. This is especially true with regard to claim 38 because the combination of acetoacetylated polyvinyl alcohol and anionic polyurethane dispersion has not been compared to the closest prior art of Niu.

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